INTRODUCING INTERNATIONAL STANDARTS IN TEACHING INFORMATICS IN THE 7TH, 8TH AND 9TH GRADE IN ALBANIA

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Abstract

This paper provides the implementation of international standards on teaching Information and Communication Technology (ICT) subjects in upper secondary schools in Albania. Two-stage process and the historical overview of actual implementations of ICT subjects are first introduced. The first stage answers whether proper curricula are chosen and implemented. The second stage outlines how the introduction is evaluated, after 10 years that ICT subjects are presented in 7th, 8th and 9th grade curricula. Implementation of ICT subjects in high performing countries in this field is examined. Some countries with similar social-economic and political conditions are analyzed.
Also a clear lack for earlier implementation of ICT knowledge is evidenced.

1. INTRODUCING

Albanian educational system is one of the systems relatively delayed in Europe for the treatment of the information technology. Especially in pre-university system has and has had difficulties in the implementation of subjects on information and communication technology. In the late 80's and early 90's can really be talked about the first ideas of the treatment of these subjects in 8-year schools (at that time). So, the beginning of the implementation of information and communication subjects is related to the political transition period of Albania.

Albanian educational system is one of the most mined structures during political and social economical transition in Albania.

Although the rate of illiteracy is obviously reduced, it should be further improved the educational level regarding to European and global standards and should be reduced the problematic scale in educational system, particularly in rural areas. Although the focus of this study will be the problem of implementing information technology subjects, it might be of interest the general contest of pre-university (9-year)

educational system. In this paper we will try to give a historical chronology over the situation and the problems of Albanian pre-university educational system and will present the input method of subjects over information and communication technology or computer science and the challenges of this process. A chronological study of educational system over years would be very useful to highlight the advantages and disadvantages of 9-year educational system in general and the advantages and disadvantages of current implementation of information and communication technology subjects in Albania.

2. A GENERAL HISTORY ON THE ALBANIAN EDUCATIONAL SYSTEM

Albanians, historically, consider education a valuable inheritance. Following the tradition of previous generations, not just in years but centuries too education continues to be one of the fundamental values of Albanian society and one of the keys of its future. The first Albanian school is officially known that of 8 March 1887 but the roots and its truth exist earlier. Since that time till now in the history of Albanian education are marked many significant facts that prove the desire and educational achievements as well as evidenced famous personalities whose attempts are focused on the enrichment of Albanians mind and on the perfection of Albanians values.

In the Albanian Republic, for decades 7 March is celebrated as the National Day of Teachers'. In fact the first documents written in Albanian belong to XV century. The oldest book in Albanian is "Meshari" of Gjon Buzuk published in 1555. The rich language and its relatively stable spelling show that this document is based on an earlier tradition of Albanian writing. The Ottoman dominion brought an economical, cultural and educational backwardness. However clerics who loved education organized the illegal teaching of Albanian into houses, churches, mosques and orthotics churches. In XVII-XVIII centuries developed the construction of medrese and Islamic schools where the main place occupied Islamic learning, but there were given even some scientific knowledge. In that time many schools were opened even by the orthodox clerk in which the lesson was given in Greek. In 1950 the Academy of Voskopoja was created, which has become an important center, with European dimensions for the cultural development and didactic thought. During the Albanian

National Renaissance era the attempts to develop education had significant increase. The Albanian League of Prizren (1878-1881) drew up the program for the official recognition of Albanian language and Albanian schools. It was assigned a common alphabet. Later many other school texts were published for Albanian schools. The first Albanian classroom with clear national physiognomy, with democratic character, common for boys and girls of all social societies and different beliefs. In 1909 the first high school of national education was opened "The Normal School" of Elbasan which served to prepare elementary school teachers. The Declaration of Independence in 1912 for the first time in the history of Albania, education and Albanian schools organized and led by the National Government, throwing in this way the initial basis of Albanian education legislation.

In the following years are many attempts for the organization of the legal state and for the introduction of the west European legislation. These years are characterized by stability of education, the consolidation of compulsory primary schools (5 years in the city) and (6 years in the villages) and the creation of the full system of secondary education.

In 1946 it was approved the first educational reform which consisted in the creation of a new educational system build on socialist principles and in the fundamental transformation of ideological criteria, scientific and pedagogical education learning process on the basis of Marxist-Leninist ideology. It was determined the structure of general secondary school, whose duration was shortened from 13 to 11 years, concretely primary education became 4 years, the unique education 3 years and the secondary education was 4 years. Primary and later 7 year education was declared compulsory. School was considered equal for all, boys and girls from cities and villages. These reforms were further followed by the beginning of the fight against illiteracy.

In 1946 the first high school in Albania was opened "The High Pedagogical Institute" in Tirana. In 1951 other high institutions were opened and in 1957 was opened the State University of Tirana. In 1963 the compulsory education passed from 7 years to 8 years and the general was extended to 12 years. Studying plans and programs made significant changes to strengthen the ideological contents. It was also given

importance to the education of the new communist generation. In 1970 the Institute of Pedagogical Studies (ISP) was established, today known as the Institute of Curricula and Training or (ICT). In the 1990s attempts were made to modernize the teaching plans and programs of pre-university education in the spirit of changes made internationally. As a result of this, work was mainly concentrated in the exact science subjects, concretely efforts were made to modernize the methods of teaching these subjects. In some of them, changes were preceded by conclusions of a national character.

3. NEW HISTORY OF EDUCATION.

Actually, the basic education or the so called compulsory education in Albania is 9 years. All children aged 6-16 must attend the elementary schooling. Parents have the right to choose between public schools, where education is offered free of charge and the licensed private schools where education is offered against a payment. Children are obligated to start school at age 6. There is no exceptional criterion for entering the first class of basic education, except for very special cases where the child appears with a very poor development.

The 9 year education began its implementation in 2003 and is divided into two cycles: primary cycle which covers the I-V classes while secondary cycle covers the VI-IX classes'. In the primary cycle all the subjects are conducted by a single teacher. Exceptions are for the fourth and fifth classes, for which, schools according to their possibilities use specific teachers for native languages, mathematics, natural sciences, foreign languages, arts and physical education. In the secondary cycle education is carried by different teachers according to fields and certain profiles.

Basic education tends to develop intellectual, creative, practice and physical abilities of students, to develop their personality and to provide them with the basic elements of general culture and civil education.

The beginning and end of school year, the number of teaching weeks, holidays and exams determine the structure of the school year. The teaching plan is basic national document drafted by the Ministry of Education and has a normative character for all basic education schools.

For each school year subjects and the amount of weekly and annually hours for each subject are listed.

The required subjects in the 9 years education system are: native language, foreign language, history, knowledge of the nature, geography, mathematics, physics, chemistry, biology, social education, physical education, music and visual education, informatics. The second foreign language is offered as optional subject. New, in the curriculum of basic education are the extracurricular activity hours with one hour a week for the primary cycle and two hours for the second. During the years 2007-2009 it was applied a successful reform in the basic education related to school-based curricula where concerned to appropriate instructions of the Ministry of Education and Science (MES) of 2007 15% of the hours of each subject of basic education should be managed by the school and teachers together holding various curricular projects with students of a class or different classes[12]. This amount of hours should support the interest and real needs of children and now in many schools the practice of curricular project implementation is present. This reform initiated the first step of the curricular management as basic education schools have their curricular part to implement. The subject program is a nominative document which is drafted with the custom of The Ministry of Education, taking into account the curriculum. Part of the curriculum are the general objectives of the subject according to subject lines, guidelines for teaching, student assessment, recommendations for scheduling along the lines and implementation issues of free hours, instruction for teaching tools. Each subject program is accompanied with curricular guide for teachers.

[13]

[12] [Source: Ministry of Labor and Social Affairs– department of statistics]

[13] http://www.daiict.ac.in/daiict/academics/ug.html

4. HISTORY OF INTRODUCING INFORMATION, TECHNOLOGY AND COMMUNICATION IN ALBANIA AND ICT EDUCATION.

4.1 Albanian Business and ICT

In this part, an online survey was conducted for the ICT usage in Albanian Businesses done for study reasons. I tried to use those data to create an idea about history of introducing ICT in Albanian businesses. The aim of this online survey was to identify how much the businesses are using Information technology and what the trend for the future in this field is. In which scale was the demand from industry for ICT education.

Figure 1: Businesses that have ICT in years 1999, 2005, 2010

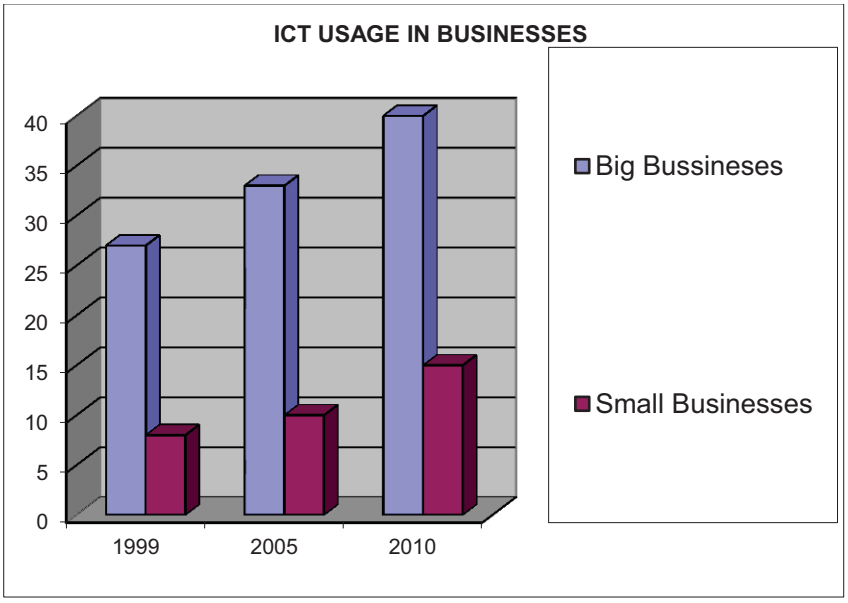

Figure 1 shows in percentage the level of completed surveys from the contracted ones. As it is shown 26% of the big businesses contacted have completed the online survey and just 7% of the small and medium businesses[14]. Even though the number of companies who took the survey was low, it can be used to gain some understanding of the situation of Albanian ICT usage[15].

14 Global Information Technology Report 2009-2010, Report 2010-2011

15 [Baci, Zoto, Hakrama, 2010]

In Albania computers first came into place in 1971. In year 1980, in Tirana was built first urban network of computers as a "system mixed of government and academic". Deep political, economic and social changes of the early 90s had a great impact on the education and scientific research in Albania.

University education in Albania started in 1951 with creation of the Polytechnic Institute, transformed in the State University of Tirana in 1957. Brunch of Mathematics was created in Faculty of Natural Sciences. In year 1989 was created in Tirana University Brunch of Informatics. In 1991 the University of Tirana was split in two: – **Polytechnic University of Tirana**, composed by engineering faculties as Mechanical Engineering, Electrical Engineering, Civil Engineering, Geology and Minerals. In 2007 two new faculties were created: Information Technology, and Mathematics and Physics Engineering. – **University of Tirana composed** by non-engineering faculties as Natural Sciences, Medicine, Law, Philology etc.

After changes of 1991, university branches in other cities were upgraded to universities in Shkodra, Elbasani, Korca, Vlora, Gjirokastra, Durresi. Some of them have departments of IT, in Shkodra and Vlora diplomas of IT are given since 4 years.

The increasing demand from business and industry for ICT specialists and the wide network of ICT educational high schools and universities, require a more qualitative and quantitative knowledge even in secondary schools.

ICT Curricula in secondary schools over the years in Albania

Before year 2000 subjects related were called Technological Knowledge

Technological education program for the **seventh grade**, of upper secondary school from 2000-2007 was also general technology with very little ICT in it.

After 2007 program for **seventh grade** included:

-Identify some of the applicative programs in the Windows operating system

-to identify the common functions of the most popular applicative programs and use them

-to identify and choose some of the problems that raise up while working in the most used in windows applications

-to be trained in the recognition and use of the keyboard, the main functions of its keys.

-to be trained to use quickly the keyboard

Technological education program for **eighths grade**, of upper secondary school from 2007- In this grade the program aims to:

-To provide sufficient knowledge information processing text program

-To prepare students to use the computer for immediate and everyday needs

-To provide sufficient knowledge for the recognition and use of processing programs of figure information.

-To provide basic knowledge of collecting and processing of the information.

-To create basis for further deepening of knowledge in the preparation of materials of the type text and table.

-To be further trained in the use of mouse and keyboard

General objectives of curricula

In informatics, in compulsory education (classes 7, 8, 9) it is intended that the student to be able to:

-Know computer and be able to identify its main parts.

-Know programs and be able to distinguish operative programs from those applicable.

-know some rules of work in computer

-identify some main functions of operative programs

-to know some features of working with the most commonly used applicative programs

-create, save, open, correct, move, manipulate, in some of the applicative programs of the windows operating system.

-understand what is internet, how it is used and exploited.

-create, open and use e-mail.

-gain a work culture to deepen knowledge independently in this area throughout life

-be trained to use well the mouse and keyboard.

Literature specifically includes:

2007-2008, was introduced for the first time text book “Informatika 7” dhe “Informatika 8” as teaching material for subject “Informatika” in upper secondary school, in grades 7, 8 with author called Federik Shalsi.

2008-2009, the text books “Informatika 7”, “Informatika 8” dhe “Informatika 9” was decided for grades 7, 8, 9 as a teaching material for subject “Informatika” in upper secondary school, in grades 7, 8 and 9 with the same author Federik Shalsi. (Curricula of three grades has significantly intersections)

After the year 2009 text books and teaching material are selected with a standard procedure from teachers of informatics in school. So is a kind of competition for best book.

Conclusion on this point is that the literature on information and communication technology for secondary schools has many deficits.

Is missing issues such are:

Economic, social and ethic aspects on using ICT

Careers in ICT

Database concepts etc

Some thing is overdone such is:

Pascal programming and/or C++ programming (9 grade)

ICT teacher training

"Teacher of Informatics" has only 3 year history. In some universities are opened professional and science master courses for preparing teachers of informatics and computer sciences. In this situation the teacher on duty in most cases are not qualified

Lack of qualification consists in the lack of in terms of professional or didactic absence. In these circumstances the ministry of education is providing courses with teachers of informatics.

Currently, in the beginning of 2011 is developed a program for teacher training for subjects of ICT. Different teachers with different educational background, can participate this program, most of them are teachers of mathematics and physics.

Only 20% of in service teachers of ICT in secondary schools are qualified [16]

ICT subjects in upper secondary schools by countries

Let us see some other countries how they performed on ICT subject implementation in secondary schools.

Country	Year of starting	Grade of starting	Performing factor
Australia	**1988**	**Grade 7**	**HP**
Kenya	**2005**	**Grade 11**	**LP**
Norway	**1986**	**Grade 6**	**HP**
Philippine	**2002**	**Grade 7**	**LP**
United Kingdom	**1985**	**Grade 6**	**HP**
Austria	**1985**	**Grade 7**	**HP**

[17]

Australia

In all of Australia, ICT is not a subject until the final two years of schooling, despite similar subjects being available before VCE or equivalent. In Victoria, children start ICT in Prep but are not reported upon until they are in Year 1. They undertake a wide range of activities using technology to learn in all curriculum areas.

Kenya

[16] Youth-Challenge.co.uk, ICT Youth Challenge

[17] http://www.wikipedia.org/

In Kenya, ICT is not taught as a subject in primary school. It is taught as an added advantage to some schools. In high school, the ICT is an optional subject. In the university level students are offered several options to choose from. One may either take Bachelor of Science in Information Technology, Bachelor of Science in Computer Science, Bachelor of Business Information Technology or Bachelor of Science in Computing Technology. All these courses are inter-related in terms of course work but differ in the majors that a student wants to take or Master.

Norway

In Norway, ICT is a course which students can select for their second year of upper secondary school. From pre-school to Year 10, ICT is interwoven throughout the curriculum as part of the Essential Learning of Communication.

Philippines

Other countries, such as the Philippines, also have integrated ICT in their curriculum. As early as pre-elementary education in some schools, pupils are having their computer subjects. Other non-computer degree courses in tertiary also incorporated Computer Technology as part of their curriculum.

United Kingdom

In the United Kingdom, Information and Communication Technology (ICT) is a subject in education, and a part of the National Curriculum. Students are taught to use software such as office suites, desktop publishers; they are also taught about ICT theory, and how ICT can be used to solve problems. Computer programming is not taught at upper secondary level.

Students also study the Data Protection Act, the Computer Misuse Act, and other legal and ethical issues related to ICT.

Many schools have specialist school status in technology and, more recently, in math and computing, and these schools champion the use of ICT to enhance teaching and learning.[18]

(Viviane Reding, Member of the European Commission responsible for Information Society).

"ICT4D Africa Scan". http://open.bellanet.org/afscan/. This is a pilot site to experiment with a different way of presenting "who is doing what" in the area of ICT for Development (ICT4D) in Africa.

"Gambia-UNESCO ICT Fellowship Center". 2006. The Stockholm Challenge. http://www.stockholmchallenge.se/projectdata.asp?id=1&projectid=916. The purpose of this initiative is to bring ICT infrastructure to the door step of young people, particularly persons with disabilities.

"Educational Technology Policy in Southern Africa". 2001. IRDC. http://www.apc.org/books/ictpolsa/ch4/ch4-toc.htm. Chapter 4 in An Information Policy Handbook for Southern Africa, edited by Tina James. This chapter examines

"ICTs in Education Options Paper". July 16, 2005. Ministry of Education, Science, & Technology, Government of Kenya. http://ict.aed.org/kenya/ICT_in_Ed_options_paper_Kenya.pdf. The paper discusses ways in which ICTs can be leveraged to support and improve the delivery of quality education for all Kenyans.

Souter, David et al. June 2005. "The Economic Impact of Telecommunications on Rural Livelihoods and Poverty Reduction". DfID. http://www.telafrica.org/R8347/files/pdfs/FinalReport.pdf. The research reported in this document assesses the impact of the telephone on the lives of the rural poor in

The cuuriculum in australia isn't very old, but it express the goods that the students can take from the itc.the capability of learning is not wide …it doesn't include all parts of life…it include only five elements Applying social and ethical protocols and practices when using ICT Investigating with ICT Creating with ICT Communicating with ICT Managing and operating ICT.

I think that the history in australia isnt so old than in England because in england it is used itc before.and so the curriculum in england has became richer and richer,it include all the parts of life,and the curriculum in england its is explained for evry step for evrything.all the student have opportunity to know the goods that came from itc.

The england curriculum is old,it's a big culture there for itc,the students and pupils have opportunity to know itc since primary school and to do it an important book to learn.as we can see the england curriculum . As we can see above the English curriculum, everything is described step by step, from its origins as the students get acquainted with the world of information and how to use, modify, adjust interfere with this information, methods and tools appropriate regulations genes educational technology policy development, particularly as it refers to the use of ICTs in schools.

If we put an eye in norway curriculum i will compare it with australian curriculum,,i would say that they are in the same level,but a little more developed is the norway curriculum.that happened because the norway is an europian city and so it has the attend of europian schools like england or france or other west cities.the norway curriculum put the emphasis in the importance of itc,it is like mathematic or like the ability of reading and writing

If we see the curriculum of albania and compare it with other cities and countries it isnt so good.we have a new culture in the world of itc.there are less than ten years that we are listening the word itc.the lessons for itc are include since the primary

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three developing countries – in the state of Gujarat in India, in Mozambique and, in Tanzania .

school but they aren't so good and so developmed.we have to do a lot of work if we want to be over europian counties because its so difficult to be like them.i think that in albania doesn't exist the culture to accept the importance of itc,,also here in albania don't exist professional teacher for itc. we still face a bitter reality that teachers of mathematics or language teacher gives ITC completed classes. if we compare the Albanian curriculum with that of other countries leaves much to be desired

5. CONCLUSIONS AND FUTURE WORK

Attention should be given to further research on pedagogy, to respond to developments in ICT industry. Model experiments should result in a full analysis of the contribution of ICT in educational outcomes, taking into account different learning styles, target groups, social and cultural contexts and sizes of groups. Practices to change the models need to be documented and studied to ensure the necessary and estimable information.

In public schools there are standard books for 7th and 8th grade which are obligatory materials. There are different study materials which can be discussed for 9th grade

There are no IT dictionaries for schools.

There are no practical guides for practical classes in upper secondary school.

Most successful performing countries are based in standards and solutions like Recommendations of UNESCO. But also these recommendations need to reconsidered in behalf of new developments in ICT fields.

Successful examples from other countries are useful to be standardizes too.

Proposed solutions will be based on High performing (HP) countries like: Austria, Finland, Sweden, Denmark and the UK ect.

Average performing (AP): Germany, Ireland, France, Netherlands, Belgium and Luxembourg might have some similarities with our country in other aspects like expert efforts, government efforts 8some key factors) for optimal implementation of ICT.

Future work on this research will be evidencing some optimal solution based on international standards about curricula, study materials, methodologies and other infrastructure elements for proposing to Albanian Educational system on teaching subjects of ICT.